

WHAT IS CLAIMED IS:

1. A position indicator, comprising:
a position indicator display and mechanism;
5 a polymer housing to house the position indicator display and mechanism; and
a one-piece clear polymer cover enclosing the position indicator display and
mechanism in the polymer housing.
- 10 2. The position indicator of claim 1 further comprising:
a hinge; and
a hand-operated latch that secures the one-piece clear polymer cover to the polymer
housing such that the one-piece clear polymer cover can be opened without the use of tools.
- 15 3. The position indicator of claim 2 wherein the hinge includes a first portion
that is integrated with the polymer housing and a second portion that is integrated with the
one-piece clear polymer cover.
- 20 4. A position indicator, comprising:
an input shaft having an angular velocity;
a pointer to indicate a position of a tap changer and having an angular velocity; and
a drive mechanism connected to the input shaft and the pointer, wherein the drive
mechanism is non-linear such that the angular velocity of the input shaft is not directly
related to the angular velocity of the pointer.
- 25 5. The position indicator of claim 4 wherein the drive mechanism includes a
Geneva-type mechanism.
6. The position indicator of claim 4 wherein a resulting motion of the pointer
includes a dwell.

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7. The position indicator of claim 4 wherein the drive mechanism includes an interchangeable output drive component to change rotation of the pointer relative to rotation of the input shaft.

5 8. The position indicator of claim 4 wherein the drive mechanism includes an output drive component and the pointer is integrated with the output drive component.

9. The position indicator of claim 4 wherein the drive mechanism includes an output drive component and the position indicator further comprises a maximum position
10 pointer actuator that is integrated with the output drive component.

10. The position indicator of claim 4 wherein the drive mechanism includes an output drive component and the position indicator further comprises a limit switch triggering cam that is integrated with the output drive component.

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11. A position indicator, comprising:
a main position indicating assembly; and
a modular maximum position indicating subassembly that is secured to the main position indicating assembly with a hand-operable fastener.

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12. The position indicator of claim 11 wherein the hand-operable fastener includes a thumbscrew.

13. The position indicator of claim 11 wherein the modular maximum position
25 indicating subassembly includes a polymer base.

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14. The position indicator of claim 11 further comprising a drive mechanism having a concentric circular gap, wherein the modular maximum position indicating subassembly fits inside the concentric circular gap in the drive mechanism.

15. The position indicator of claim 11 wherein the modular maximum position indicating subassembly is configured to be secured to the main position indicating assembly without tools.

5 16. The position indicator of claim 11 wherein the modular maximum position indicating subassembly includes a solenoid that is capable of receiving a quick connecting electrical connector.

10 17. A position indicator, comprising:
a housing;
a limit switch; and
a one-piece limit switch adjuster that holds the limit switch and further includes integrated functionality to constrain the one-piece limit switch adjuster in the housing without fasteners.

15 18. The position indicator of claim 17 wherein the one-piece limit switch adjuster includes a molded polymer part.

20 19. The position indicator of claim 17 further comprising a retaining ring, and wherein the one-piece limit switch adjuster includes an integrated tab that mates with a notch on the retaining ring to hold the one-piece limit switch adjuster in place in the housing.

25 20. The position indicator of claim 17 wherein the housing includes a channel and the one-piece limit switch adjuster slides in the channel in the housing.

21. The position indicator of claim 20 wherein the one-piece limit switch adjuster slides in the channel in the housing without a bearing or a hinge.

30 22. The position indicator of claim 17 wherein the one-piece limit switch adjuster includes a rocker-type snap switch.